

CLAIMS

1. A nonaqueous pressure-sensitive adhesive for a medicinal tape preparation for percutaneous absorption, characterized by comprising a copolymer obtained by copolymerization of a (meth)acrylic monomer having an acetoacetyl group in the molecule and one or more monomers from among other (meth)acrylic monomers with no acetoacetyl group and copolymerizable vinyl monomers, in a nonaqueous solvent.

2. A nonaqueous pressure-sensitive adhesive for a medicinal tape preparation for percutaneous absorption according to claim 1, characterized in that the copolymer is a copolymer obtained by copolymerization of an acetoacetoxylalkyl acrylate or acetoacetoxylalkyl methacrylate and one or more monomers from among other (meth)acrylic monomers with no acetoacetyl group and copolymerizable vinyl monomers.

3. A nonaqueous pressure-sensitive adhesive for a medicinal tape preparation for percutaneous absorption according to claim 1 or 2, characterized in that the copolymer is a copolymer obtained by copolymerization of an acetoacetoxylalkyl acrylate or acetoacetoxylalkyl methacrylate and one or more (meth)acrylic monomers selected from the group consisting of 2-ethylhexyl acrylate, methyl methacrylate, diacetoneacrylamide, butyl acrylate, ethyleneglycol dimethacrylate, ethyleneglycol diacrylate,

diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate, tetraethyleneglycol dimethacrylate, hexaethyleneglycol dimethacrylate and acrylamide.

4. A nonaqueous pressure-sensitive adhesive for a medicinal tape preparation for percutaneous absorption according to any one of claims 1 to 3, characterized in that the copolymer is a copolymer obtained by copolymerization of 2-acetoacetoxyethyl methacrylate and one or more (meth)acrylic monomers selected from the group consisting of 2-ethylhexyl acrylate, methyl methacrylate, diacetoneacrylamide, butyl acrylate, ethyleneglycol dimethacrylate, ethyleneglycol diacrylate, diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate, tetraethyleneglycol dimethacrylate, hexaethyleneglycol dimethacrylate and acrylamide.

5. A nonaqueous pressure-sensitive adhesive for a medicinal tape preparation for percutaneous absorption according to any one of claims 1 to 4, characterized by comprising a copolymer obtained by copolymerization of 2-acetoacetoxyethyl methacrylate in an amount of 1-40 wt% of the total copolymer weight and one or more (meth)acrylic monomers selected from the group consisting of 2-ethylhexyl acrylate, methyl methacrylate, diacetoneacrylamide, butyl acrylate, ethyleneglycol dimethacrylate, ethyleneglycol diacrylate, diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate, tetraethyleneglycol dimethacrylate, hexaethyleneglycol dimethacrylate and

acrylamide.

6. A nonaqueous pressure-sensitive adhesive for a medicinal tape preparation for percutaneous absorption according to any one of claims 1 to 5, characterized in that  
5 the copolymer is a copolymer obtained by copolymerization of 2-acetoacetoxyethyl methacrylate, diacetoneacrylamide, 2-ethylhexyl acrylate, methyl methacrylate and tetraethyleneglycol dimethacrylate.

7. A nonaqueous pressure-sensitive adhesive for a  
10 medicinal tape preparation for percutaneous absorption according to any one of claims 1 to 6, characterized in that the copolymer has a calculated glass transition temperature (T<sub>g</sub>) of between -60°C and -5°C.

8. A medicinal tape preparation for percutaneous  
15 absorption comprising (a) a support, (b) a pressure-sensitive adhesive layer containing a drug and a nonaqueous pressure-sensitive adhesive and (c) a release film laminated in that order, the medicinal tape preparation for percutaneous absorption being characterized in that said  
20 pressure-sensitive adhesive layer is formed by coating a support or release film with a nonaqueous pressure-sensitive adhesive comprising a copolymer obtained by copolymerization of a (meth)acrylic monomer having an acetoacetyl group in the molecule and one or more monomers from among other  
25 (meth)acrylic monomers with no acetoacetyl group and copolymerizable vinyl monomers, in a nonaqueous solvent, together with a drug, and heating to dryness.

9. A medicinal tape preparation for percutaneous absorption according to claim 8, characterized in that the copolymer is a copolymer obtained by copolymerization of an acetoacetoxyalkyl acrylate or acetoacetoxyalkyl methacrylate and one or more monomers from among other (meth)acrylic monomers with no acetoacetyl group and copolymerizable vinyl monomers.

10. A medicinal tape preparation for percutaneous absorption according to claim 8 or 9, characterized in that the copolymer is a copolymer obtained by copolymerization of an acetoacetoxyalkyl acrylate or acetoacetoxyalkyl methacrylate and one or more (meth)acrylic monomers selected from the group consisting of 2-ethylhexyl acrylate, methyl methacrylate, diacetoneacrylamide, butyl acrylate, ethyleneglycol dimethacrylate, ethyleneglycol diacrylate, diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate, tetraethyleneglycol dimethacrylate, hexaethyleneglycol dimethacrylate and acrylamide.

11. A medicinal tape preparation for percutaneous absorption according to any one of claims 8 to 10, characterized in that the copolymer is a copolymer obtained by copolymerization of 2-acetoacetoxyethyl methacrylate and one or more (meth)acrylic monomers selected from the group consisting of 2-ethylhexyl acrylate, methyl methacrylate, diacetoneacrylamide, butyl acrylate, ethyleneglycol dimethacrylate, ethyleneglycol diacrylate, diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate,

tetraethyleneglycol dimethacrylate, hexaethyleneglycol dimethacrylate and acrylamide.

12. A medicinal tape preparation for percutaneous absorption according to any one of claims 8 to 11,  
5 characterized by comprising a copolymer obtained by copolymerization of 2-acetoacetoxyethyl methacrylate in an amount of 1-40 wt% of the total copolymer weight and one or more (meth)acrylic monomers selected from the group  
10 consisting of 2-ethylhexyl acrylate, methyl methacrylate, diacetoneacrylamide, butyl acrylate, ethyleneglycol dimethacrylate, ethyleneglycol diacrylate, diethyleneglycol dimethacrylate, triethyleneglycol dimethacrylate, tetraethyleneglycol dimethacrylate, hexaethyleneglycol dimethacrylate and acrylamide.

15 13. A medicinal tape preparation for percutaneous absorption according to any one of claims 8 to 12, characterized in that the copolymer has a calculated glass transition temperature (T<sub>g</sub>) of between -60°C and -5°C.

20 14. A medicinal tape preparation for percutaneous absorption according to any one of claims 8 to 13, characterized in that the pressure-sensitive adhesive layer further comprises a plasticizer.

25 15. A medicinal tape preparation for percutaneous absorption according to claim 14, characterized in that the plasticizer is one or more oils selected from the group consisting of fatty acid esters, higher alcohols and castor oil.

16. A medicinal tape preparation for percutaneous absorption according to claim 14 or 15, characterized in that the plasticizer content is no greater than 50 wt% of the total weight of said pressure-sensitive adhesive layer.

5        17. A medicinal tape preparation for percutaneous absorption according to claim 15 or 16, characterized in that the plasticizer is one or more fatty acid esters selected from the group consisting of isopropyl myristate, isopropyl palmitate, medium-chain fatty acid triglycerides,  
10       diethyl sebacate and diisopropyl adipate.

18. A medicinal tape preparation for percutaneous absorption according to claim 17, characterized in that the plasticizer is isopropyl myristate.

19. A medicinal tape preparation for percutaneous  
15       absorption according to any one of claims 14 to 18, characterized in that the nonaqueous pressure-sensitive adhesive comprises a copolymer obtained by copolymerization of 2-acetoacetoxyethyl methacrylate, diacetoneacrylamide, 2-ethylhexyl acrylate, methyl methacrylate and  
20       tetraethyleneglycol dimethacrylate in a nonaqueous solvent, and the plasticizer is isopropyl myristate.

20. A medicinal tape preparation for percutaneous absorption according to any one of claims 8 to 19, characterized in that the drug is a percutaneously absorbing  
25       drug selected from the group consisting of steroid hormones, non-steroidal anti-inflammatory drugs, tranquilizers, anti-hypertensive agents, ischemic heart disease drugs, anti-

histamines, antiasthmatic drugs, anti-Parkinson drugs, cerebral circulation improvers, antiemetics, anti-depressants, anti-dementia drugs, Sjogren's syndrome treatments, anti-arrhythmia drugs, anticoagulants, gout suppressants, antifungal agents, narcotic analgesics, beta blockers,  $\beta 1$  agonists,  $\beta 2$  agonists, antitumor agents, diuretics, antithrombotic agents, histamine H1 receptor antagonists, histamine H2 receptor antagonists, anti-allergic agents, serotonin receptor antagonists, anti-hypercholesteremic agents and smoking cessation aids.

21. A process for production of a medicinal tape preparation for percutaneous absorption comprising (a) a support, (b) a pressure-sensitive adhesive layer containing a drug and a nonaqueous pressure-sensitive adhesive and (c) a release film laminated in that order, the process being characterized by coating the surface of a release film or support with a nonaqueous pressure-sensitive adhesive comprising a copolymer obtained by copolymerization of a (meth)acrylic monomer having an acetoacetyl group in the molecule and one or more monomers from among other (meth)acrylic monomers with no acetoacetyl group and copolymerizable vinyl monomers, in a nonaqueous solvent, with a drug and if necessary with a plasticizer, heating to dryness to form a pressure-sensitive adhesive layer, and then laminating a release film or support thereon and cutting it to a desired size.

22. A process for production of a medicinal tape

preparation for percutaneous absorption according to claim 21, characterized in that the pressure-sensitive adhesive layer is formed by heat drying at 40-150°C.